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THE EFFECTIVENESS OF DIRECT TRADE BETWEEN CHINA AND NEAR-BORDER SUBJECTS OF THE RUSSIAN FEDERATION[1]

The subject matter of this article is the mutual international settlements between Russia (i.e. its border regions) and China in yuans. An advantage of such settlements is determined by the amount of money which can be spared by the Russian importers of Chinese products in case of direct trade. The topic of the article encompasses the analysis of export-import operations and national currencies' use, in particular, the yuan, in the cross-border settlements between Russia and China. The objective of this article is to reveal the role of China in the international activities of the Russian near-border regions on the basis of the analysis of export and import statistics database. The hypothesis of this article is that the dynamics of Chinese imports to the Russian near-border regions correlates with the amount of the yuans traded on the Moscow Stock Exchange. The article produces forecasts of Chinese imports to the Russian near-border regions and the amount of money, which can be spared by the Russian importers in the case of a transition in bilateral settlements to the yuan. The outcomes of the article include the calculated indicators of the efficiency of the direct trade between China and Russia and of the coverage of Chinese imports in the Russian near-border regions by the yuan. The findings of the article are recommended to the Russian international companies as and reference point to increase the profitability of export-import operations with China, and to federal and local governments to create the Russian external economic strategy. The authors come to the conclusion that if the Chinese imports to the Russian border region were in the yuan, then the yuans volume of trade on the Russian foreign exchange market would allow the direct settlements with China.

Keywords: Russian near-border regions, international use of rouble and yuan, direct trade efficiency, BRICS countries

1. Introduction

In order to overcome the consequences of the global financial and economic crisis of 2008–2010, some advanced countries, particularly the United States and the European Union, pursued the loose monetary policy. It meant the low-interest rates to loan money to commercial banks, households, producing firms and other economic actors. The monetary easing led to an increase in money supply as a result of turning to the printing press and multiplying the newly created money not only in the issuer countries, but also abroad, for the US dollar, and the euro are world reserve currencies. Emerging economies are the major holders of the world reserve currencies. The reason for the emerging economies to accumulate the reserve currencies is that their national currencies are not fully convertible. They are viable to substantial fluctuations, not credible for foreign investors and not taken as a means of payment in international settlements [1].

Huge amounts of the reserve currencies' issue, in their turn, resulted in reducing the real value of the emerging economies' official reserves. And as they need the reserve currencies to finance imports, the emerging economies turned to the International Monetary Fund, multilateral and regional banks of development. They also started issuing government bonds, which consequently led to an increase in government debt, inflation, unemployment and many other social and economic problems in those countries [2]. Besides, many emerging economies like China peg their currencies to the dollar. That is why under the dollars' uncontrolled issue, the emerging economies met with a necessity to take special measures to support the exchange rates of their currencies against the dollar. One of such measures was the use of the emerging economies' currencies in regional or international settlements. Economic theory calls this process currency internationalization. Nevertheless, it does not necessarily require a wider use of a particular currency in the global economy. A self-sustaining condition for currency internationalization is a use of a currency unit in cross-border transactions between countries and regions which are closely interconnected, particularly it is true for the members of one and the same regional trade agreement, or countries that have a common border, like Russia and China [3].

[1] Original Russian Text © M. V. Zharkov, 2016, published in Ekonomika regiona [Economy of Region]. — 2016. — Vol. 12, Issue 1. — 189–200.

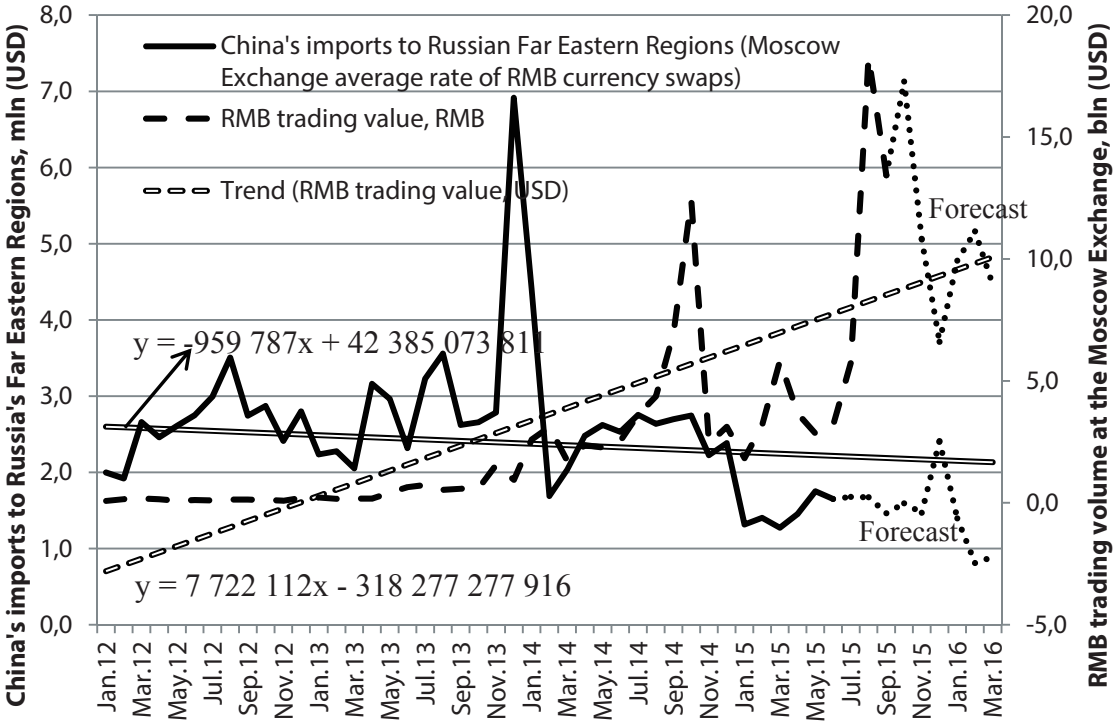

Fig. 1. *The dynamics of actual and prospective volumes of Chinese imports to the Russian Far Eastern Regions in the case of direct settlements in RMB (Conceived by the author on the basis of the following sources: Statistics on the Markets of Group "Moscow Stock Exchange". Retrieved from: http://fs.moex.com/files/4243/ (date of access: 10.10.2015); The Dynamics of the official exchange rate of a given currency. Retrieved from: http://www.cbr.ru/currency_base/ dynamics.aspx?VAL_NM_RQ=R01235&date_req1=07.10.2011&date_req2=30.04.2015&rt=1&mode=1 (date of access: 10.10.2015))*

Among the emerging economies' currencies, the BRICS' ones, i.e. the Brazilian real, Russian rouble, Indian rupee, Chinese yuan (or Renminbi, RMB) and South African rand, enjoy the brightest prospects of currency internationalization. Some authors believe that an increase in the BRICS' currencies' use in international settlements may lead to strengthening the world monetary system [4], which is going to be achieved thanks to a consequent diversification of the international reserves [5, p. 211], of course if other countries are to store these currencies in their official reserves [6].

The theoretical basis of national currencies' use in international or interregional settlements have been laid out by foreign as well as Russian writers who see in this process great benefits for issuer countries [7–11], which are determined by seigniorage, i.e. the income they receive when issuing a fully convertible currency, as well as the costs of the currency internationalization [12] which are incurred by the necessity to liberalize the capital markets, allow a free float of currencies, giving up independent monetary policy, etc. [13–15].

2. Methods

The outcomes of this article are based on the assumption that the direct trade between Russia (namely its Far Eastern border regions) and China, for instance in RMB, will create incentives for mutual exports and imports and increase efficiency in by-lateral settlements in the future. This efficiency may be understood as the amount of money spared by the Russian border area regions when importing from China.

To estimate the amount of money that the importers of Chinese products in the Russian Far Eastern regions may receive in the case of direct settlements in the foreseeable future, for example up to 2016, it is necessary to conduct a survey using correlation analysis. As is noted above, the dynamics of Chinese imports to the Russian Far Eastern border regions and the RMB trading volume at the Moscow Exchange closely correlate, it means that the contours of the former should graphically embrace those of the latter (see. fig. 1–2). Also for purposes of a targeted prognosis of the amount of money spared and received by the importers in the Russian Far Eastern border regions (for example, in late 2015—early 2016), it is necessary to break down the periods into quarters when estimating the correlation between the Chinese imports and RMB trading volume at the Moscow Exchange. And in the case of close correlation between them, it is possible on the basis of their past dynamics (or retrospective data)

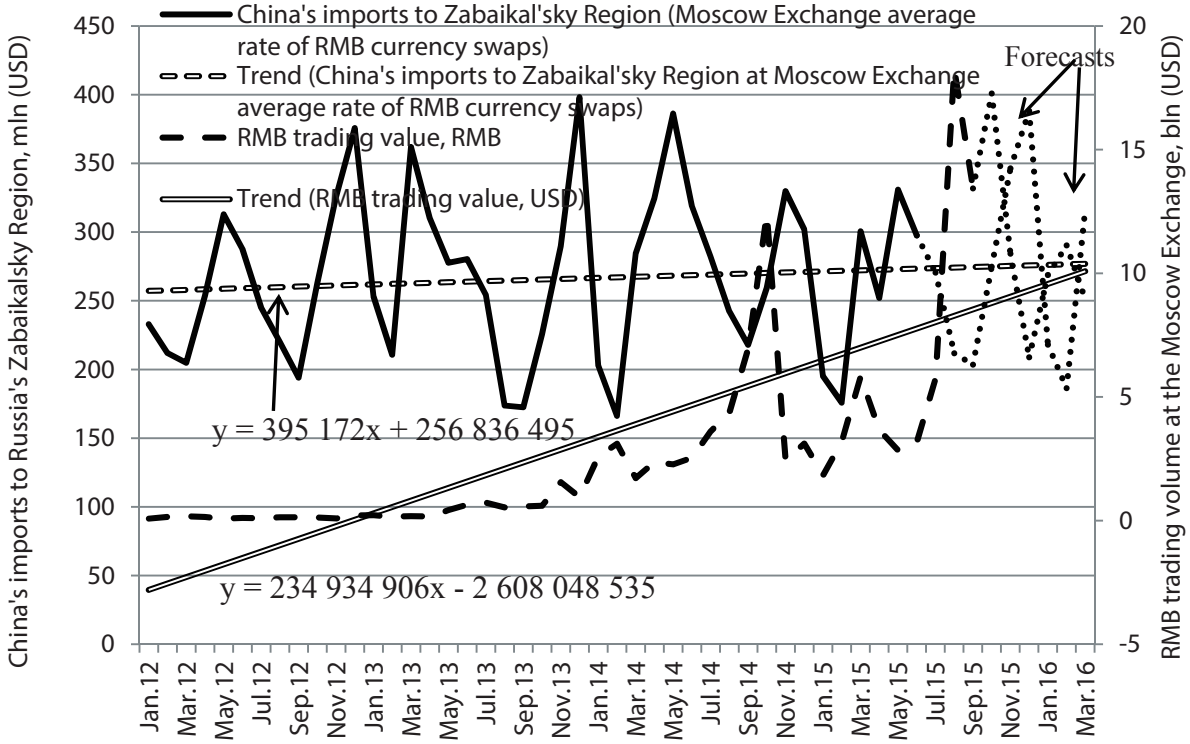

Fig. 2. *The dynamics of actual and prospective Chinese imports to Zabaikal'sky Region in case of direct settlements in RMB (Conceived by the author on the basis of the following sources: Statistics on the Markets of Group "Moscow Stock Exchange". Retrieved from: http://fs.moex.com/files/4243/ (date of access: 10.10.2015); The Dynamics of the official exchange rate of a given currency. Retrieved from: http://www.cbr.ru/currency_base/ dynamics.aspx?VAL_NM_RQ=R01235&date_req1=07.10.2011&date_req2=30.04.2015&rt=1&mode=1 (date of access: 10.10.2015))*

to understand what they are going to be like in the future. The respective correlation indicators are presented in Table 1 where the cases of closest correlation are put in bold. These indicators show the extent to which the prognosis can be considered as true. This prognosis is made by means of applying trend lines to the Chinese imports' dynamics and RMB trading volume at the Moscow Exchange, which is graphically shown in Figures 1 and 2.

The efficiency of direct settlements between the Russian Far Eastern border regions and China is determined by the amount of money which can be spared when purchasing yuans at the Moscow Exchange instead of turning to the Bank of Russia. In order to calculate the amount of money thus spared, the author proposes that the Chinese imports' dollar value in 2012–2015 should be converted into the yuans at the exchange rate of the Bank of Russia. Then the calculated number should be compared with the imports' RMB value at the rate of the Moscow Exchange. Eventually, if the Chinese imports' RMB value at the rate of the Moscow Exchange is less than that at the rate of the Bank of Russia, then the importers in the Russian Far Eastern border regions could receive a profit (the spread) in the case of direct settlements with their Chinese counterparts in 2012–2015. Otherwise, the importers would incur financial losses which might occur under the same conditions as a result of the unfavourable rate of exchange of the rouble to the yuan at the Moscow Exchange. According to the author's calculations[2], in the period of 2012 to 2014, the importers of the Russian Far Eastern border regions gained more than they lost, whereas beginning from 2015, their losses started to exceed the gains. Their losses were due to the substantial rouble devaluation in late 2014—early 2015. In total, in the period of 2012–2014, the Russian Far Eastern importers could have saved about 200 million RMB (3 million US dollars) in the case of direct settlements with China, whereas in 2015, according to the author's calculations, they would have lost 425 million RMB (67 million US dollars) (see. Table. 2). This means that 2015 would be an unfavourable year to make direct settlements between the Russian Far Eastern regions and China in yuans.

[2] Table 2 displays the extract of calculated amounts of money which could be saved by the importers in the case of direct settlements between the Russian Far Eastern regions and China.

Table 1

The correlation of Chinese imports to the Russian Far Eastern regions and RMB trading volume at the Moscow Exchange in 2012–2015*

Period	Far Eastern regions of Russia					
	Amurskaya region	Primorsky region	Zabaikalsky region	Khabarovsky region	The Republic of Altai	The Jewish autonomous region
Q1 2012	**0.8335**	0.5429	**–0.9996**	0.2526	**0.7629**	**0.7786**
Q2 2012	–0.0905	–0.6146	**–0.9948**	**–0.9939**	**–0.8312**	**–0.9018**
Q3 2012	0.0221	0.5240	**–0.8803**	–0.4620	**–0.9992**	**0.8822**
Q4 2012	0.2167	**0.9379**	0.6378	–0.2845	–0.4962	–0.0524
2012	0.2411	0.1730	0.0641	–0.2992	–0.4311	0.1804
Q1 2013	0.1934	0.0765	–0.0016	0.2740	–0.5561	–0.2516
Q2 2013	–0.6658	**–0.8751**	**–0.8485**	0.6916	**0.9428**	**0.9711**
Q3 2013	0.4038	–0.2814	**0.9742**	**0.9406**	**0.9810**	**0.9176**
Q4 2013	**–0.7424**	–0.0708	0.2185	–0.5838	–0.2268	–0.6405
2013	–0.4587	0.3924	0.1775	–0.3135	0.5342	0.2432
Q1 2014	–0.4945	0.1287	**–0.9997**	**–0.9279**	–0.0147	–0.9910
Q2 2014	0.4776	–0.5637	**–0.8507**	0.2352	**–0.9360**	0.2463
Q3 2014	–0.5006	0.1477	**–0.8764**	**–0.9348**	**–0.9994**	**0.7083**
Q4 2014	**0.9626**	–0.2208	**–0.9022**	**0.8672**	0.4577	**0.9957**
2014	0.2689	0.1062	–0.2782	0.1251	–0.0642	0.2584
Q1 2015	**0.9537**	**–0.7628**	**0.8755**	0.4325	**–0.6983**	–0.4831

* Conceived by the author on the basis of the following source: Statistics on the Markets of Group "Moscow Stock Exchange". Retrieved from: http://fs.moex.com/files/4243/ (date of access: 10.10.2015).

Table 2

Calculating the amount of money saved as a result of direct settlements in a case of Chinese imports to the Russian Far Eastern regions, 2014*

Indicator	Whole region	Amurskaya region	Primorsky region	Zabaikalsky region	Khabarovsky region	The Republic of Altai	The Jewish autonomous region
China's imports, bln USD	5.08	0.34	3.90	0.54	0.23	0.00	0.07
China's imports, bln roubles, at the rate of Bank of Russia	193.00	12.52	148.24	20.77	8.90	0.12	2.46
China's imports, bln RMB, at the rate of Bank of Russia	31.32	2.08	24.03	3.33	1.45	0.02	0.41
China's imports, bln RMB, at the average rate of yuan currency swaps at the Moscow Exchange	31.21	2.07	23.94	3.32	1.44	0.02	0.41
The amount of money spared, mln RMB	115.26	7.80	91.30	9.71	5.14	0.09	1.22
The amount of money spared, mln USD	18.13	1.25	14.37	1.50	0.81	0.01	0.20
Yuan' coverage of Chinese imports to Russian Far Easter regions, %	152.3	2293.7	198.4	1432.4	3288.3	240327.1	11575.9

* Conceived by the author on the basis of the following source: Statistics on the Markets of Group "Moscow Stock Exchange". Retrieved from: http://fs.moex.com/files/4243/ (date of access: 10.10.2015).

3. Results

Most notable example demonstrating the trustworthiness of the conceived prognosis is a case of Zabaikalsky region. The analysis of the data in Table 1 has shown that during 2014, the correlation between China's imports to Zabaikalsky region and RMB trading volume at the Moscow Exchange exceeded 0.85 and was close to 1. Based on the assumption that such level of correlation and extreme

Table 3

Forecasting the amount of money spared when importing from China to the Russian Far Eastern regions in case of direct settlements in July 2015 — March 2016*

Indicator	Whole region	Amurskaya region	Primorsky region	Zabaikalsky region	Khabarovsky region	The Republic of Altai	The Jewish autonomous region
China's imports, bln USD	2.02	0.08	1.52	0.36	0.02	0.00	0.04
China's imports, bln roubles, at the rate of Bank of Russia	142.06	5.16	106.46	25.82	1.57	0.07	2.98
China's imports, bln RMB, at the rate of Bank of Russia	12.76	0.48	9.57	2.29	0.14	0.01	0.27
China's imports, bln RMB, at the average rate of yuan currency swaps at the Moscow Exchange	13.39	0.50	10.04	2.42	0.15	0.01	0.28
The amount of money spared, mln RMB	–636.61	–19.77	–466.89	–130.31	–5.24	–0.29	–14.12
The amount of money spared, mln USD	–100.68	–3.13	–73.80	–20.63	–0.83	–0.05	–2.24
Yuan' coverage of Chinese imports to Russian Far Eastern regions, %	762.6	20478.8	1017.2	4225.1	69770.5	1592452.0	36030.5

* Conceived by the author on the basis of the following sources: Statistics on the Markets of Group "Moscow Stock Exchange". Retrieved from: http://fs.moex.com/files/4243/ (date of access: 10.10.2015); The Dynamics of the official exchange rate of a given currency. Retrieved from: http://www.cbr.ru/currency_base/ dynamics.aspx?VAL_NM_RQ=R01235&date_req1=07.10.2011&date_req2=30.04.2015&rt=1&mode=1 (date of access: 10.10.2015).

points of fluctuations (import's maximum in May 2014 and its maximum in September 2014 as well as RMB trading volume's maximum at the Moscow Exchange in October 2014 and its minimum in September–October 2015) would repeat in 2015, then a fall or an increase in forecast data of the imports and the RMB trading volume would have to drop or soar accordingly. When drawing trend-lines to the Chinese imports to Zabaikalsky region and RMB trading volume at the Moscow Exchange (which are displayed by the corresponding equations in Figure 2), it can be seen that after reaching their maximum in May 2015,Chinese imports and RMB trading volume would have to fall in August–September 2015, and a new maximum of Chinese imports is expected in October 2015 when the RMB trading volume at the Moscow Exchange will also reach its maximum (see. fig. 1).

The prognostic data in Figure 2 allow to calculate the amount of money which can be spared by the importers of Chinese products in Zabaikalsky region in late 2015 — early 2016. The forecast volume of the money spared by the importers in Zabaikalsky region is displayed in Table 3 and according to the author's prognosis should amount in total to –130.3 mln RMB (–20.6 mln USD) in the given space of time. It means that in the period of July 2015 — March 2016, it would be unfavourable for Zabaikalsky region's importers as well as for those of all Russian Far Eastern regions to transact directly with China in yuans, and they would have to give preference to US dollars despite the fact that in 2014, as is shown in Table 2, they would have spared about 10 mln RMB (1.5 mln USD) from those transactions.

The rest of cases of forecasting imports to each of the Russian Far Eastern regions can be conceived in analogy to the way shown in Figure 2. The dynamics of Chinese imports to the Russian Far Eastern regions as a whole and the dynamics of RMB trading volume at the Moscow Exchange in January 2012 to June 2015 are demonstrated in Figure 1 together with the prognostic curves, which illustrate their probable fluctuations in July 2015 — March 2016. These curves correspond to the equation-functions with an application of the trend-lines, which characterize the imports to the Russian Far Eastern regions as a whole. The assumption of such a prognosis is that to keep it trustworthy in the foreseeable future the RMB trading volume at the Moscow Exchange in 2015–2016 should stay at an average monthly level reached in 2012–2014, for there is always uncertainty and unpredictability about the trading volumes and currency exchange rates. Based on that prognosis, the total amount of money spared by the Russian Far Eastern regions when importing from China directly in yuans is going to amount to –636.6 mln yuans (–100.7 mln dollars) in July 2015 — March 2016, which is again linked to the unfavourable situation on the Russian foreign exchange market in late 2014 — early 2015. According to

the author's prognosis, in total, this unfavourable situation is also a cause of a drop in China's imports to the Russian Far Eastern regions from 5 bln USD in 2014 down to 3 billion USD in 2015. According to the author's forecast, in 2015, this unfavourable foreign exchange market's conditions would also be a cause for a drop in Chinese monthly imports to the Russian Far Eastern border regions from 5 bln USD in 2014 to 3 bln USD in 2015. Although it is important to note that the RMB coverage of Chinese imports to the Russian Far Eastern border regions would increase significantly up to 762.2 % in Q1 of 2016, largely due to a decrease in the imports' volumes. Such volume of circulating yuans is not only enough to transact directly in local currencies between the Russian border regions, but also to finance more than half of all Chinese imports coming to Russia as a whole (see. Table 2, 3). However, in order to accomplish this, Russian rouble and RMB market in Russia should be stabilized in the long term, so that RMB trading would evolve intensively laying the foundation for a deeper development of cross-border trade between the Far Eastern regions and Russia as a whole and China.

4. Discussion

Initially, the yuan and the rouble were used as currencies for direct settlements between China and Russia in the cross-border area. The Russian border area with China includes the Amurskaya, Zabaikalsky, Primorsky, Khabarovsky, Jewish autonomous regions and the Republic of Altai. It is particularly the analysis of the opportunities to trade directly in national currencies between those regions and China that this article is devoted to[3].

The Russian border area regions differ greatly in terms of development[4] and involvement in foreign trade. The Primorsky region is employed most intensively in foreign trade. In 2012, its foreign trade quota amounted to 47 %. The rest of the Russian border area regions are less involved in foreign trade. Comparative data for the Russian border area regions in terms of export, import and foreign trade quotas are presented in Table 4.

Table 4

Foreign trade indicators of the Russian border area regions with China, 2012*

Indicator	Amurskaya region	Primorsky region	Zabaikalsky region	Khabarovsky region	The Republic of Altai	The Jewish autonomous region
Gross regional product (GRP), mln USD	7530.9	7257.1	17861.6	953.1	13970.6	1366.1
GRP per capita, USD	9218.9	6626.3	9172.9	4532.1	10409.5	7910.6
Imports per capita, USD	918.5	475.2	3323.6	76.8	806.9	263.8
Imports' share in total consumption per capita, %	10.0	7.2	36.2	1.7	7.8	3.3
Chinese imports per capita, USD	824.2	453.2	1721.1	20.8	341.4	259.8
Chinese imports share in total consumption per capita, %	8.9	6.8	18.8	0.5	3.3	3.3
Chinese produce share in total consumption of imports per capita, %	89.7	95.4	51.8	27.1	42.3	98.5
Exports per capita, USD	499.0	282.3	979.5	194.7	1152.6	92.1
Import quota, %	10.0	7.2	36.2	1.7	7.8	3.3
Export quota, %	5.4	4.3	10.7	4.3	11.1	1.2
Foreign trade quota, %	15.4	11.4	46.9	6.0	18.8	4.5

* Conceived by the author on the basis of the following source: The Terminal of external economic information of the Ministry of Economic Development: Russian-Chinese trade and economic cooperation. Retrieved from: http://www.ved.gov.ru/exportcountries/cn/cn_ru_ relations/cn_ru_trade/ (date of access: 10.10.2015).

The analysis of Table 4 shows that the share of imported products in total consumption of each resident in the Russian border area regions did not exceed 10 % in 2012. The exception was only in the Primorsky region where each resident purchased 36.2 % of all his/her products from abroad in

[3] China's border area with Russia includes provinces Hēilóngjiāng, Jílín sheng, Xīnjiāng Wéiwú'ěr Zìzhìqū and Inner Mongolia.

[4] Per capita gross regional product (GRP) is the lowest in the Republic of Altai and Zabaikalsky region and the highest — in Khabarovsky region (table 4).

Table 5

China's foreign trade with the Russian border regions in figures, 2014*

Indicator	Whole region	Amurskaya region	Primorsky region	Zabaikal'sky region	Khabarovsky region	The Republic of Altai	The Jewish autonomous region
Imports from China, mln USD	5081.0	337.5	3900.8	537.9	234.8	3.2	66.8
Total imports, mln USD	9542.0	501.1	7559.0	551.2	818.2	42.0	70.5
China's share in the imports, %	53.2	67.4	51.6	97.6	28.7	7.6	94.7
Exports to China, mln USD	2994.5	335.5	1889.5	69.1	677.9	0.5	22.0
Total exports, mln USD	6060.4	383.4	3972.3	217.6	1437.8	25.7	23.6
China's share in the exports, %	49.4	87.5	47.6	31.8	47.1	2.0	93.3
Foreign trade balance with all countries, mln USD	15602.4	884.5	11531.3	768.8	2256.0	67.7	94.1
Foreign trade balance with China, mln USD	8075.5	673.0	5790.3	607.0	912.7	3.7	88.8
China's share in foreign trade balance, %	51.8	76.1	50.2	79.0	40.5	5.5	94.4

* Conceived by the author on the basis of the following source: Export and Import of the most important goods in January — December 2014. Federal Customs Agency. Retrieved from: http://customs.ru/index2.php?option=com_content&view=article&id=20495&Itemid=1981 (date of access: 10.10.2015).

2012. Meanwhile, the share of Chinese products in their consumption did not exceed on average 7 % in the Russian border area regions, and again only in Primorsky region it was almost 20 %. It is also noteworthy that Chinese goods dominated in the total volume of imported products consumed by each resident in the Russian border area regions in 2012. In case of the Amurskaya, Zabaikalsky and Jewish autonomous regions, the Chinese goods occupied over 90 % in their imports' consumption per capita (see. Table. 4). This particularly means that the major foreign trade partner of the Russian border area regions is China.

In 2014, the China's share in foreign trade balance of the Primorsky region was 50.2 %, Khabarovsky region — 40.5 %, Zabaikalsky region — 79.0 %, Amurskaya region — 76.1 %, the Republic of Altai — 5.5 % and the Jewish autonomous region — 94.4 %. For the latter China was also the most important and the greatest exports and imports partner by far. Comparative data on China's share in exports, imports and foreign trade balance of the Russian border area regions are outlaid in Table 5. On the whole, these numbers demonstrate the stability of the Russia-China foreign trade's dynamics in the Far East in the course of 2012–2015, so that it is possible to argue that their bilateral trade is going to be characterized by an increasing trend in the long run as well.

Since China plays a very important role in the foreign trade of the Russian border area regions, it is quite prudent to make settlements in national currencies (roubles or yuans) when importing or exporting. This may result in direct trade between Russia and China. Today, foreign trade between the Russian border area regions and China is overwhelmingly done in US dollars. However, since 1992 China and Russia concluded a number of bilateral agreements allowing for direct settlements in national currencies of both countries when importing or exporting[5]. Based on these bilateral agreements, the right to settle cross-border transactions in roubles and yuans was given to the commercial banks located in Blagoveschenks (Russia) and Hēihé (China). In turn, the Chinese government allowed its national banks and companies to receive payments from their counterparts in Russia in yuans and roubles. In the course of 1992–2010 the above agreements were valid only in the border area of Russia and China. Since late 2010 they were extended to the whole territory of both countries. For this reason their foreign exchange markets saw a currency pair rouble/yuan in Russia and yuan/rouble in China.

Direct settlements in roubles and yuans between Russia and China are currently slowed by quite high transaction costs. This happens because, for example, in order to purchase Chinese imported products by any of the Russian border area regions they would first have to buy dollars in exchange

[5] Foreign trade between Russia and China in national currencies is transacted based on the Agreement between the Bank of Russia and People's Bank of China on the inter-banking settlements in trade in the border area (Shanghai, 22.08.2002) (http://base.consultant.ru/cons/cgi/online.cgi?req=doc;base=INT;n=47054).

Table 6

The correlation between Chinese imports to the Russian border area regions and Russia as a whole and RMB trading at the Moscow Exchange depending on the development periods of the yuan's currency market in Russia in 2012–2015*

Far Eastern regions of Russia	1st stage	2nd stage			3rd stage		
	Spot	Spot	Swap	Total	Spot	Swap	Total
Amurskaya region	–0.0965	–0.0259	–0.1379	–0.1262	0.3770	–0.0092	0.3422
Primorsky region	–0.0655	–0.1808	–0.1853	–0.2113	–0.1298	–0.2253	–0.1731
Zabaikalsky region	0.1185	–0.7910	–0.2454	–0.4375	–0.2387	–0.0486	–0.2298
Khabarovsky region	–0.4225	–0.3138	0.4521	0.2998	0.0536	–0.2257	–0.0057
The Republic of Altai	–0.5961	–0.5808	0.2641	0.0615	–0.0484	–0.2815	–0.1123
The Jewish autonomous region	0.0070	0.0899	0.5266	0.4794	0.1868	0.0814	0.1904
Whole Russia	–0.0829	0.7051	0.6312	0.7453	0.2281	0.1160	0.2365

* Conceived by the author on the basis of the following source: Trading Results. Moscow Stock Exchange. Available at: http://www.micex.ru/marketdata/quotes?group=currency_selt&data_type=history (date of access: 10.10.2015).

for roubles, then yuans in exchange for the dollars in the Bank of Russia and only after this they could be able to pay for their imports from China in the latter's national currency. In turn, to finance the delivery of the products from Russia on to its domestic market in case of direct selltements, China would also have to purchase dollars, exchange them into roubles in the People's Bank of China and eventually pay the Russian exporters in roubles. It is also crucial to take into account the existing foreign exchange restrictions in China which prevent free float of foreign capital in any form including physical or electronic money transfers. In addition, Russian exporters and the government find it much more beneficial to receive from China dollars for the domestic products because the foreign exchange is the foundation of official reserves and is more stable in comparison with the local currencies.

Since at this stage of the bilateral trade's development Russia cannot completely give up dollars as a currency of international settlements, and China additionally is not able to get rid of all its foreign exchange restrictions, it was necessary to develop ways which allow to finance at least part of the mutual transactions in the national currencies under the existing circumstances in cross-border trade. One of such ways has become trading in yuans and roubles at the Moscow Exchange and in the China Foreign Exchange Trade System (CFETS).

The currency pair rouble/yuan was first introduced into the trading floor of the Moscow Exchange in October 2011. Initially, there was only the RMB spot market. The spot market is a foreign currency market with an immediate delivery of currency. However, the specifics of the spot transactions in Chinese yuans at the Moscow Exchange is that still their delivery cannot be made possible immediately due to the existing restrictions in China itself. So, in the end RMB transactions occur in Moscow electronically without physical currency.

The development of the RMB market in Russia can presumably be split into the following three periods:

1) October 2011 — March 2013;

2) April — September 2013;

3) from November 2013 onwards.

Such iterative division as applied to the results of this article is determined by the discovery of increasing correlation between Chinese imports to the Russian border area regions and RMB trading at the Moscow Exchange when moving from one period or stage to the other. For example, in the first period under consideration, there was a weak correlation between these two dynamics. It amounted to not more than 0.1, except the Khabarovsky region and the Republic of Altai where this correlation was quite tight and equaled 0.4 and 0.6 respectively (see. Table. 6). It can be explained by the fact that during the initial stage, the Russian importers were not interested in purchasing yuans to transact with Chines counterparts due to the circumstance that there was no separate rouble-to-yuan fixing mechanism at the Moscow Exchange, and the Russian importers had to conclude the currency swaps to deliver the needed yuans at the rate of the Bank of Russia. That also meant that at this stage, the RMB purchasing basically occurred for speculative purposes aimed at making profits using favourable spreads between the exchange rates of various currencies. As a result, it was quite clert at the first stage

that such way of stimulating direct settlements between China and the Russian border area regions would not be fruitful.

In April 2013, the RMB currency market at the Moscow Exchange was expanded to include currency swap transactions, i.e. contracts for a timely delivery of yuans on a non-delivery basis. The period of April–October 2013 can be basically defined as a transition stage because it was characterized by experiments in introducing various types of contracts to buy or sell yuans to stimulate direct settlements between Russia and China[6]. However, most of them are not engaged in the trading and do not meet demand at the Moscow Exchange. At this stage like at the first one, yuans were purchased mainly for speculative purposes, i.e. the traders sold or bought the currency in expectation of a rise or fall in the exchange rate of any currency and then again sold or bought it. Nevertheless, Table 6 shows that the correlation between Chinese imports to the Russian border area regions and RMB trading at the Moscow Exchange strengthened significantly in 2012–2015, which especially is true for the Zabaikalsky and Jewish autonomous regions where in this period, the correlation indicators amounted to 0.8 (in spot transactions) and 0.5 (in swap transactions) respectively. Growth in the correlation tightness between Chinese imports to the Zabaikalsky and Jewish autonomous regions and RMB trading at the Moscow Exchange can be explained by the circumstance that the majority of imported goods to these Russian regions comes from China. It means that the second stage of RMB currency market's development in Russia laid down the foundations of foreign direct settlements between China and the Russian border area regions.

The start of the third, current stage of the Russia–China's mechanism of direct cross-border settlements in November 2013 coincided with the launch of the rouble-to-yuan fixing procedure at the Moscow Exchange[7]. Now, if rouble-to-yuan exchange rate at the Moscow Exchange would fix at a lower level than in the Bank of Russia, i.e. one yuan would purchase more roubles at the Moscow Exchange than in the Bank of Russia, then, when converting roubles into yuans at the Moscow Exchange to finance the delivery of Chinese products, the importers in the Russian border area regions would receive less yuans than they would have had otherwise. Consequently, the direct settlements between China and Russia at such an exchange rate would not be favourable for the Russian importers. However, the introduction of the rouble-to-yuan fixing procedure at the Moscow Exchange did not become an important stimulus for purchasing yuans and financing Chinese imports to the Russian border area regions in them, because due to an increase in the volume of RMB speculative transactions and hence the demand for the yuan, it was a more expensive transaction at the Moscow Exchange than in the Bank of Russia. Table 6 demonstrates that the indicators of the correlation between Chinese imports to the Russian border regions and RMB trading at the Moscow Exchange dropped in compare to the previous period. Despite this, the results of RMB trading development at the Moscow Exchange include, on the one hand, an increase in the volumes of RMB swap currency contracts required to finance the Chinese imports, and, on the other hand, an understanding that to transact directly in local currencies between the Russian border area regions and China, apart from the existing instruments, there is a need in finding new ways and approaches for a further development. One of such ways proposed in this article is to increase exports from the Russian border area regions to China. For example, if a rouble-to-yuan exchange rate at the Moscow Exchange does not fit the importers in the Russian border area regions, but is more favourable in the CFETS, then it is advisable to purchase yuans in the latter, deposit them on a special bank account for further electronic transactions, or use the yuans received from exports of the Russian border area regions to China for the same purposes in order to at least partially cover the imports, because the total value of exports from the Russian border area regions to China would be still not enough to finance the whole Chinese imports. Besides, each of the Russian border area regions has foreign trade balance deficit with China. Moreover, the yuan/rouble trading volume in the CFETS is very much restricted and controlled by a special Chinese government foreign exchange overseer. This

[6] As of Q4 2015 RMB transactions at the Moscow Exchange occur via two spot currency instruments (CNYRUB_TOD and CNYRUB_TOM) and two swap currency instruments (CNY_TODTOM and CNY_TOMSPT). In 2011–2015 the majority of RMB trade at the Moscow Exchange was done through CNYRUB_TOM contracts. Moreover, there is a number of other RMB currency contracts at the Moscow Exchange such as CNY_TOM1M, CNYRUB_LTV, CNY_TOM1W, CNY_TOM2M, CNY_TOM2W, CNY_TOM3M and CNY_TOM6M. However, since their launch in April 2013, there was not one contract concluded.

[7] Fixing is a process of setting the rate of exchange of a particular currency against the other at a particular moment at the stock exchange. It usually happens at the end of a trading session.

is one of the reasons why the rouble/yuan trading volume there does not usually exceed 290 million dollars on an average monthly basis according to CFETS data in 2014–2015[8].

It is also noteworthy that the amount of RMB traded at the Moscow Exchange is quite enough to finance the total value of Chinese imports to the Russian border area regions. In order to calculate the local currency coverage of Chinese imports to the Russian border area regions, the author proposes a coefficient of foreign exchange coverage of imports which is a percentage ratio of the total volume of the yuans purchased at the Moscow Exchange over a given period (for example, a month, quarter or year) divided by the aggregate RMB value of the Chinese products imported to the Russian border area regions in the same timeframe[9]. If this coefficient or ratio amounts to 1.0 or 100 %, then in the case of direct settlements between the Russian border area regions and China, the volume of RMB traded at the Moscow Exchange would be enough to fully cover the value of the imports. Table 2 shows that in 2014, the coefficient of Chinese imports' coverage in RMB equaled 152.3 %.

Thus, the calculated amounts of money which can be spared when trading directly in the local currencies between the Russian border area regions and China as well as forecast imports data bring about a conclusion that the mutual use of the local currencies (i.e. roubles and yuans) in mutual foreign direct settlements will slow down in 2016, and to return to the growth rates achieved in the Russia — China trade and foreign exchange transactions in 2012–2014, the Russian government needs to stimulate the RMB market, and the Moscow Exchange is required to offer more favourable conditions for yuans' purchasing so that the importers of Chinese products to Russia could use the yuans in foreign trade with China on a much broader basis.

References

1. Mwase, N. & Yongzheng, Y. (2012). BRICs' philosophies for development financing and their implications for LICs. *IMF Working Paper, 12(74),* 13–17.

2. Carrasco, E. R., Carrington, W. V. & Lee, H. J. (2009). Governance and accountability: The regional development banks. *Boston University International Law Journal, 1,* 1–60.

3. Potemkin, A. I. (2010). Ob usilenii roli rossiyskogo rublya v mezhdunarodyikh raschotakh [On the increasing role of Russian rouble in international settlements]. *Dengi i kredit [Money and credit], 8,* 3–10.

4. Binder, A. I. (2013) Nekotoryye aktualnyye aspekti transformatsii yuanya v mirovuyu valyutu [Some acute aspects of yuan's transitioning into a world currency]. *Dengi i kredit [Money and credit], 11,* 59–62.

5. DeRosa, D. F. (2013). *Foreign Exchange Operations: Master Trading Agreements, Settlement, and Collateral.* New Jersey: Wiley, 416.

6. Cohen, B. J. (2012). The Benefits and Costs of an International Currency: Getting the Calculus Right. *Open Economies Review, 1(23),* 16–17.

7. Avdokushin, Ye. F. & Kovalenko, V. N. (2012). Perspektivy internatsionalizatsii kitayskogo yuanya: mozhet li yuan stat mirovoy valyutoy? [The prospects of yuan's internationalization: Can the yuan become a world currency?]. *Voprosy novoy ekonomiki [New economy issues], 2,* 43–49.

8. Borisov, S. M. (2011). Rossiyskiy rubl v mezhdunarodnykh raschotakh: geografiya i statistika [Russian rouble in international settlements: geography and statistics]. *Dengi i kredit [Money and credit], 12,* 15–23.

9. Andreyev, V. P. (2012). Internatsionalizatsiya yuanya: novyye vozmozhnosti [Yuan's internationalization: new opportunities]. *Dengi i kredit [Money and credit], 5,* 69–73.

10. Goldberg, L. S. & Cédric, T. (2008). Vehicle Currency Use in International Trade. *Journal of International Economics, 2(76),* 177–192.

11. Kiyotaki, N. & Wright, R. (1989). On Money as a Medium of Exchange. *Journal of Political Economy, 4,* 927–954.

12. Lee, H. & Rhee, C. (2012). Lessons from the 1997 and the 2008 Crises in Korea. *Asian Economic Policy Review, 1,* 47–64.

13. Ostry, J. Managing Capital Flows: What Tools to Use? *Asian Development Review, 1,* 82–88.

14. Sekine, E. Renminbi Trade Settlement as a Catalyst to Hong Kong's Development as an Offshore Renminbi Center. *Nomura Journal of Capital Markets, 1,* 1–14.

15. Vdovin, A. N. (2014). Bankovskaya Sistema KNR: kluycheviye problemi [PRC's Banking System: the key issues]. *Mirivaya ekonomika i mezhdunarodnyye otnosheniya [World economy and international relations], 9,* 75–83.

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[8] Monthly Bulletin on RMB/FX Spot. China Foreign Exchange Trade System. Retrieved from: http://www.chinamoney.com.cn/fe/Channel/2783206 (date of access: 10.10.2015).

[9] Import and export statistics are usually presented in dollar value. So, for the purposes of this article to calculate the yuan's coverage of Chinese imports to the Russian border area regions it was necessary to convert the import's volume in dollar terms into that in RMB terms at the rate of the Bank of Russia.